Design Review
50 BED DISTRICT WOMEN'S HOSPITAL DESIGN DEVELOPMENT
drawings dated March 19, 2010
WO-A-0022

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Comment #	Reviewer	Reference	Comment	Response Code	Response	Back-Check
CIVIL ENGINEERING DRAWINGS FOR 50 BED DISTRICT WOMEN'S HOSPITAL DRAWINGS, AYBAK, AFGHANISTAN						
Civil	Civil Drawing Comments	2-3	Note 4 refers to drawing series 10.00 for burial pit details. This drawing series is not included in the set, nor is it listed in the drawing index G01.01.			
Struct	Structural Drawing Comments	4-5	The C2.00 series drawings contain a note regarding assumptions that were made during design of the earth-retaining walls. It goes on to state that the assumptions are to be verified by a qualified geotechnical engineer prior to construction.			
Mech	Mechanical Drawing Comments	6-8	Note 4 for both boundary retaining wall details 3A and 4A suggests that regrading outside of the site may need to be performed if the maximum height differentials for the walls cannot be met. Does the owner have control of the land outside of the site? If not, then authorization will need to be obtained. Otherwise, the wall design will need to be modified if necessary.			
Plumb	Plumbing Comments	9-10	There are several guardrail details shown on this drawing, however the concrete stair detail does not address the possible need for guardrails.			
Elec	Electrical Drawing Comments	11-12	This sheet shows details for an entrance gate with attachments to what appears to be a wall. If this wall is a portion of the boundary retaining wall, has this portion been designed to accommodate the loads imposed by the gate(s)? Also, none of the other drawing sheets show any references to or locations for entrance gates.			
Tech	Technical Drawing Comments	13-16	This sheet shows finish grades and contours, however the existing grade on adjoining properties is not shown. We are unable to verify the required retaining wall heights without this information.			
C-7	CTJ/Civil	Sht C5.01	This sheet shows the storm water drainage layout with a large number of lateral pipes connecting to a soakway along the approximate perimeter of the site. A number of these pipes connect to the soakway by means of manholes. There is no indication or detail showing how the remaining pipes connect to the clay pipe within the soakway and at what elevation these connections are to be made.			
C-8	CTJ/Civil	Sht C5.01	There is invert and cover level information supplied for all of the proposed manholes. There is no similar information provided for the gullies (storm water inlets).			
C-9	CTJ/Civil	Sht C5.01	From the manhole invert information, it can be seen that the grade of the soakway is intended to be level. There is no indication on the plan or details confirming this, nor is there any information regarding the required grade (pitch) of the lateral connecting pipes.			
C-10	CTJ/Civil	Sht C6.01	Profiles of the piping for the greywater and blackwater systems have not been provided in the C6.00 sheet series.			

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C-11	CTJ/Civil	Sht C6.01	Invert levels have been provided for the manholes, however invert levels at the building connection points have not.			
C-12	CTJ/Civil	Sht C6.02	It is recommended that the wet well sump floor elevation be set a minimum of 1200 below the invert level of the inlet pipe. This will provide alarm indication prior to flooding of the blackwater piping system.			
C-13	CTJ/Civil	Sht C6.02	Note on wet well sectional elevation indicates pumping rate, but no discharge head information. This needs to be provided and coordinated with design of blackwater treatment system.			
C-14	CTJ/Civil	Sht C7.01	There are no details or notes regarding restraint of pipe joints for either the domestic or fire water systems.			
C-15	CTJ/Civil	Sht C7.02	There are a large number of valves, several pumps and various pieces of treatment equipment shown on the water piping diagram. No details on the sizing and other equipment requirements are shown.			
C-16	CTJ/Civil	Sht C7.03	There are two different sheets labeled C7.03 in the drawing set.			
C-17	CTJ/Civil	Sht C7.03	Many of the C7.00 series drawings contain a note regarding assumptions that were made during design of the foundations and walls. It goes on to state that the assumptions are to be verified by a qualified geotechnical engineer prior to construction.			
C-18	CTJ/Civil	Sht C7.03	Note number 11 indicates that the water tower top slab elevation is to be coordinated so that it is 18m above the hospital finish floor. Has the structural design of the tower taken into account the variability of the height of the tower?			
C-19	CTJ/Civil	Sht C7.05	This sheet indicates the layout of controls and other components for the water system. There are no notes or details regarding operating parameters or sequences for the system.			
C-20	CTJ/Civil	Sht C9.01	The C9.00 series drawings indicate a number of french drains to be constructed. There are no details for this construction and also no indication as to whether these would be connected to the site storm water system.			
C-21	CTJ/Civil	Sht C9.11	There is no indication on the typical details as to required thicknesses of gravel and cobble surfacing materials and topsoil thickness.			
C-22	CTJ/Civil	Specs.	Specification sections relating to civil items are missing from the project manual. A complete review cannot be completed without them.			
C-23	CTJ/Civil	Civil Narrative	Page 3 of 16 indicates that the soil permeability for design of the soakway is based on an assumed value. This value needs to be confirmed prior to construction and adjustments to the soakway sizing made as appropriate.			
C-24	CTJ/Civil	Civil Narrative	Volume calculations for sizing of the soakway have not been included for review.			

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C-25	CTJ/Civil	Civil Narrative	Calculations for sizing of the greywater and blackwater filtration beds have not been included for review.			

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STRUCTURAL COMMENTS FOR 50 BED DISTRICT WOMEN'S HOSPITAL DRAWINGS, AYBAK, AFGHANISTAN						
Civil	Civil Drawing Comments	2-3	PLEASE SPECIFY TYPICAL LINEAR DIMENSION UNITS ON THE DRAWINGS.			
Struct	Structural Drawing Comments	4-5	PLEASE MATCH HATCHES ON KEY PLANS WITH PARTIAL ROOF PLANS			
Mech	Mechanical Drawing Comments	6-8	PLEASE SPECIFY UNITS FOR T/FTG EL -750 AND T/PIER EL -30 UNDER NOTES. SEE ATTACHMENT			
Plumb	Plumbing Comments	9-10	DETAIL 3 ON S2.03. CHANGE 1'-0' TO METRIC			
Elec	Electrical Drawing Comments	11-12	BOF EL. OF INTERIOR FOOTINGS ARE AT EL -1150MM AND -1250MM. PLEASE CHECK IF IT IS REQUIRED TO BE THIS LOW FOR INTERIOR FOOTINGS			
Tech	Technical Drawing Comments	13-16	1/S2.01 SHOWS 750MM LAP LENGTH FOR 16 DIA DOWELS AND 8/S2.01 SHOWS 600MM LAP LENGTH FOR 16 DIA DOWELS. PLEASE COORDINATE			
S-7	JZ	REBARS ON ALL DETAILS	DELETE "#" BEFORE REBAR, ADD " DIA" OR "Ø" BEHIND THE REBAR : CHANGE "#16" TO "16 Ø" TYPICAL ALL SIMILAR LOCATIONS.			
S-8	JZ	S1.01D	CC1- COLUMN? WASN'T ABLE TO FIND SIZE OF CC1			
S-9	JZ	DETAILS 2 & 3/S2.03	MISSING BASE PLATE AND A.B. SIZES. DETAIL 3 MISSING PIER SIZE AND REINFORCEMENT			
S-10	JZ	S1.01A	PLEASE SPECIFY STEEL WIRE FABRIC TYPE WITH SPACING FOR THE SLAB ON GRADE			
S-11	JZ	DETAIL 8 /S2.01	REFER TO PLAN FOR FOUNDATION WALL THICKNESS. NO WALL THICKNESS IS SHOWN ON FOUNDATION PLAN. TYPICAL SIMILAR LOCATIONS			
S-12	JZ	S1.01A OR DETAIL 1 / S2.01	NOT CLEAR ON HOW THE CMU WALLS OR FOUNDATION WALLS LOCATED ON THE GRID LINES. PLEASE CLARIFY.			
S-13	JZ	PLANS	WASN'T ABLE TO FIND CMU SHEAR WALL LOCATIONS. PLEASE CLARIFY.			
S-14	JZ	CMU DETAIL	MISSING CMU CONTROL JOINT DETAIL			
S-15	JZ	3/S2.02	INTERIOR CMU PARTITION REINFORCING - MISSING HORIZONTAL REINFORCEMENT REQUIREMENT.			
S-16	JZ	CMU DETAILS ON S2.02	STRUCTURAL CMU BOND BEAM DETAIL 2/S2.02 SHOWS TWO HORIZONTAL REBARS IN THE CELL. DETAILS 4 TO 7 CALLED OUT ONE HORIZONTAL REBAR. PLEASE COORDINATE.			
S-17	JZ	CMU DETAILS	MISSING INTERIOR CMU BEARING WALL REINFORCING REQUIREMENT			
S-18	JZ	CMU DETAILS	MISSING TYPICAL EXTERIOR NON-SHEAR WALL REINFORCING REQUIREMENT			
S-19	JZ	DETAIL 4/S2.02	CALLED OUT VERTICAL REINFORCEMENT 2-16 AT 100CM O.C... SHALL IT BE 1-16 AT 100CM O.C.?			
S-20	JZ	S1.02D	BETWEEN GRID F AND G STATES" SECONDARY VALLEY FRAMING SEE 8/S2.03. NO 8/S2.03.			

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S-21	JZ	S1.02D	BETWEEN GRID F AND G, GRID 1 AND 2, NO ROOF FRAMING IS SPECIFIED.			
S-22	JZ	S1.01A AND DETAIL 10 / S2.01	DETAIL 10 ON S2.01 AND NOTE F11 ON S0.01 SPECIFIED 150MM COMPACTED GRANULAR FILL AS UNDERBED. PLAN S1.01A SPECIFIED 200MM COMPACTED GRANULAR FILL AS UNDERBED.			
S-23	JZ	DETAIL 2 / S3.01	PLEASE SPECIFY BRIDGING SIZES AND CONNECTION PLATES.			
S-24	JZ	DETAIL 2 / S3.02	MISSING TRUSS TYPE B BEARING ON INTERIOR SUPPORT DETAIL.			
S-25	JZ	S0.01	G2: DESIGN LOADS: Ss= 40%g. IT SEEMS TOO SMALL. UNDER FINAL DESIGN DEVELOPMENT DELIVERABLES - BASIS OF DESIGN Ss=2.4G=240%G. PLEASE COORDINATE AND CHECK			
S-26	JZ	S0.01	M2 IS NOT FINISHED.			
S-27	JZ	S0.01	D3: METAL ROOF SHALL BE ASTM A 611. SPEC SECTION 05 31 23 SPECIFIES ASTM A 653. PLEASE COORDINATE			
S-28	JZ	S0.01	D6; WELDED AT 13CM O.C. ROOF DECK RIBS ARE USUALLY AT 15CM O.C. (6IN O.C.). PLEASE COORDINATE			
S-29	JZ	S0.01	D6: SIDE LAPS: 10 - 5MM SCREWS. UNDER STRUCTURAL SYSTEM NARRATIVE: IT SPECIFIES 8-5MM SCREWS. PLEASE COORDINATE			
S-30	JZ	SPEC SECTIONS 03 30 00 AND 03 30 26	PLEASE PROVIDE REASON WHY WE NEED TWO CAST-IN-PLACE CONCRETE SPEC. BOTH OF THEM STATES "SECTION INCLUDES ALL CAST-IN-PLACE CONCRETE INDICATED ON STRUCTRUAL DRAWINGS AS SPECIFIED.			
S-31	JZ	SPEC SECTIONS 03 30 00 AND 03 30 26	SPEC SECTIONS SPECIFIES 4000PSI CONCRETE (OR 5000PSI CONCRETE). NOTE C2 ON S0.01 AND STRUCTURAL NARRATIVES SPECIFIES 4500 PSI CONCRETE. PLEASE COORDINATE			
S-32	JZ	SPECS	MISSING METRIC CONVERSION ON SOME SECTIONS. PLEASE CHECK ALL.			
S-33	JZ	SPECS	SPEC AND STRUCTURAL NARRATIVE SPECIFY A36 OR A992 FOR STEEL W SHAPES. NOTE S2 ON S0.01 SPECIFIES A992 FOR W SHAPES. PLEASE COORDINATE AND SPECIFY WHICH ONE WILL BE USED. IF A992 WILL BE USED, PLEASE CALL OUT GRADE AND CHECK AVAILABILITY IN AYBAK, AFGHANISTAN.			
S-34	JZ	C6.05, C7.04, C7.0, C8.02 & C8.03	INSTEAD OF USING XX KG/M^2 REINF. OR KG/M, CALL OUT REINFORCEMENT AS XX DIA @ XX O.C.			

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MECHANICAL COMMENTS ON 50-BED WOMEN'S HOSPITAL DRAWINGS, AYBAK, AFGHANISTAN						
Civil	Civil Drawing Comments	2-3	Sheet Index does not match drawing designations. Correct to M1.01A, M1.01B, M1.01C, M1.01D, M2.01A, M2.01B, M2.01C, and M2.01D.			
Struct	Structural Drawing Comments	4-5	Note refers to Typical Isolation Space Layout in Ward-019A but there does not appear to be a detail in drawing set.			
Mech	Mechanical Drawing Comments	6-8	FCU-14 distributes 335 L/S but schedule gives 355 L/s.			
Plumb	Plumbing Comments	9-10	FC-07 diffuser label is missing in Corridor.			
Elec	Electrical Drawing Comments	11-12	Consider delivering 85% supply air to HOOD 1 via FC-05A and FC-05B compared with exhaust rate of hood. Running under a small negative pressure would mitigate air spillage into kitchen.			
Tech	Technical Drawing Comments	13-16	Gravity vents types GV-1 and GV-2 have not been specified or scheduled.			
M-7	CSR	M2.01A	Delineate fuel oil tank vault location north of MATERIAL MANAGEMENT SPRT 005.			
M-8	CSR	M2.01A	Finned tube in LAUNDRY SPRT 004 appears to be blocking door. Adjust or note if FT is mounted up high over door.			
M-9	CSR	M2.01B	In CORR 009, indicate pipe riser to run over door. Consider adding metal pipe enclosure to protect pipe insulation.			
M-10	CSR	M2.01C	In CORR 007, indicate pipe riser to run over door. Consider adding metal pipe enclosure to protect pipe insulation.			
M-11	CSR	M4.01 Detail 1	There is no indication where the fuel tank vault is located in plan view.			
M-12	CSR	M4.01 Detail 1	Show isolation valves at all FOS/FOR piping to individual HW boilers Steam Boilers, and Generators.			
M-13	CSR	M4.01 Detail 1	Provide piping detail for in-line fuel oil pumps (FOP), including isolation valves, strainers, etc. Provide labels (FOT 1, FOT 2, etc.) for tanks on the drawing detail.			
M-14	CSR	M4.01 Detail 1	Indicate whether supply and exhaust air tunnels are concrete or metal ductwork. If metal duct is used, add underground duct insulation to spec. section 23 07 00. If tunnel is concrete, provide detail or indicate where detail may be found in drawing set.			
M-15	CSR	M4.01 Detail 1	Provide detail for mounting and/or tie-down of fuel tanks.			
M-16	CSR	M5.01	Complete entries in Break Tan/Fill System Sch., Boiler (Hydronic) Sch., Air Curtain Sch., and Expansion Tank Sch.			
M-17	CSR	M5.01	Pump Sch. - edit Note 4, seal type.			
M-18	CSR	M5.01	Air Curtain Sch. - provide L/S (GPM).			

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M-19	CSR	M5.01	Boiler (Hydronic) Sch. - Consider reducing to 30% glycol for better heat transfer and pressure drops at pumps. Confirm glycol use; none of the hydronic coils appear to be de-rated for glycol.			
M-20	CSR	M5.01	Expansion Tank Sch. - Change label designation to HX-1 to match label on M7.01.			
M-21	CSR	M5.02	Fan Coil Sch. - FC-14 L/S (CFM) doesn't match drawing (see comment above for M1.01C.)			
M-22	CSR	M5.02	Unit Heater (Electric) Sch. - EUH-02 serves SPRT 009 PRIMARY GEN. EUH-04 and -05 serve SPRT 011 INCINERATOR. Remarks column should include items 2. and 3.			
M-23	CSR	M5.02	Air Handler Unit Sch. - complete entries. Air Cooled Condensing Unit Sch. - add entries in REMARKS column.			
M-24	CSR	M5.03	Cabinet Unit Heater Sch. - add entries in REMARKS column.			
M-25	CSR	M5.03	Fan Sch. - Change Kitchen Hood fan to "KE-1" to match drawing label on M1.01 D.			
M-26	CSR	M5.03	Split System AC Unit Sch. - Correct tag designations for outdoor condensing units and delete "REMOTE UNIT TAG" column. Complete schedule entries.			
M-27	CSR	General	Provide a schedule for LOUVERS.			
M-28	CSR	M6.01	Consider adding seismic hanger restraint details for pipes and duct.			
M-29	CSR	M6.04	Detail 5- there does not appear to be any reheat coils in project. Delete detail.			
M-30	CSR	M6.05	Propane Tank Piping Detail 4 - add dimension for "MINIMUM".			
M-31	CSR	23 05 00 Basic Materials and Methods	3.01 P. - Delete blank paragraph.			
M-32	CSR	23 05 14 Variable Frequency Controllers	There does not appear to be any VFC's in project. Delete section.			
M-33	CSR	23 05 29 Hangers and Supports	3.-4 N. - Grooved joints requirements should be moved to section 23 21 13 Hydronic Piping.			
M-34	CSR	23 05 93 Testing, Adjusting, and Balancing	1.02 B. - Edit types of systems to match project scope (i.e., delete "Induction Unit Systems."			
M-35	CSR	23 05 93 Testing, Adjusting, and Balancing	3.03 2. and 17, 3.04 C, and 3.10 B. - Delete paragraph. 3.19 B. - Confirm that there is an Alternate for increasing the tolerance range.			

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M-36	CSR	23 07 00 Mechanical Insulation	Edit spec. for project requirements. Paragraph 3.25 - Piping insulation schedule seems to repeat info that is in paragraph 3.26. Is there underground ductwork for the intake/exhaust air tunnel for the fuel vault; if so, specify underground duct insulation.			
M-37	CSR	23 09 93 Sequence of Operations	1.06 E. Two Pipe Fan Coil Unit - in most cases, spaces do not have thermostats. How does the discharge temperature alone control space temperature? (Typ. FCs 1, 2, 6-19.)			
M-38	CSR	23 09 93 Sequence of Operations	Add control sequences for: Boiler Feed Tank pumps, Fuel Oil Pumps, Air Curtains, Air Cooled Condensing Units for air handlers, and Split System AC units.			
M-39	CSR	23 11 13 Fuel Oil Piping	2.03 A. - Delete.			
M-40	CSR	23 21 13 Hydronic Piping	Consider removing plastic pipe from project.			
M-41	CSR	23 21 23 Hydronic Pumps	Edit section to remove unused pump types.			
M-42	CSR	23 22 13 Steam and Condensate Piping	2.09 - Add High Pressure Drain Trap indicated on M6.05, Detail 5. Consider adding schedule of trap types.			
M-43	CSR	23 23 01 Refrigerant Piping	Delete references to Hot Gas Piping in paragraphs 1.04A, 2.03H., 2.03N., O., P., 3.01C., D., E., 3.02C., D., E., and 3.03C., D., E.			
M-44	CSR	23 31 13 Metal Ducts	2.01 - Edit for materials used in project.			
M-45	CSR	23 33 00 Duct Accessories	1.02 - Edit for accessories used in project.			
M-46	CSR	23 34 23 Power Ventilators	1.02 - Edit for fan types used in project.			
M-47	CSR	23 37 23 Intake and Relief Ventilators	1.02 A. Roof plan shows only gravity vents; delete references to goosenecks and louver penthouses.			
M-48	CSR	23 51 00 Breeching…	Edit section for chimney types and materials used in project.			
M-49	CSR	23 89 19 Fan-Coil Units	1.06 - Delete paragraph (no FCs have condensing units.) 2.01 L.2.a. and 2.02 K. 2.a. - Edit to eliminate mechanical cooling modes.			
M-50	CSR	23 84 13 Humidifiers	Correct section number format in Title and Footers.			

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PLUMBING COMMENTS ON 50 BED DISTRICT WOMEN'S HOSPITAL DRAWINGS, AYBAK, AFGHANISTAN						
Civil	Civil Drawing Comments	2-3	What is Triple Oil Basin?			
Struct	Structural Drawing Comments	4-5	Under Piping Symbols; when you refer to "back water valve" do you mean "ball valve"?			
Mech	Mechanical Drawing Comments	6-8	All "YH-1" designations should read "WH" for wall hydrant			
Plumb	Plumbing Comments	9-10	In Corr-014 provide size of expansion loop			
Elec	Electrical Drawing Comments	11-12	In Materials Management Room; is the cold water line supplying the wall hydrant outside?			
Tech	Technical Drawing Comments	13-16	What is designation SSS-1 for?			
P-7	DCG	P1.01A	In mechanical room; show expansion tank and check valve on cold water at water heater. Correct piping at water heater and TMV			
P-8	DCG	P1.01A	Is RPZ required on sterilizer vs the double check valve shown?			
P-9	DCG	P1.01B	All "YH-1" designations should read "WH" for wall hydrant			
P-10	DCG	P1.01B	In Corr-WD-02 provide size of expansion loop			
P-11	DCG	P1.01B	In Corr-WD02 provide check valves and balance valves on mains			
P-12	DCG	P1.01B	Is RPZ required on sterilizer vs the double check valve shown?			
P-13	DCG	P1.01B	What is designation SSS-1 for?			
P-14	DCG	P1.01C	All "YH-1" designations should read "WH" for wall hydrant			
P-15	DCG	P1.01C	In Corr-WD-03 provide size of expansion loop			
P-16	DCG	P1.01D	Provide sizes on expansion loops			
P-17	DCG	P1.01D	Provide check valves and balance valves on water mains			
P-18	DCG	P1.01D	All "YH-1" designations should read "WH" for wall hydrant			
P-19	DCG	P2.01A	In CORR-015 what is tag GM/1?			
P-20	DCG	P2.01B	In CORR-WD-02 what are tags GM/1?			
P-21	DCG	P5.01	Detail 1: What are designations CS-1?			
P-22	DCG	P5.01	Detail 1: provide vacuum breaker or air gap			
P-23	DCG	P5.02	Are you supplying air chamber or shock absorbers?			
P-24	DCG	P5.02	List pipe type for small water lines to water closets			
P-25	DCG	P5.02	The note under drainage fixture units table should read: "ALL UNDERGROUND PIPE SIZE SHALL BE 50mm (2") MINIMUM."			
P-26	DCG	P5.02	What velocities are the water supply fixture units pipe sizing chart based on?			
P-27	DCG	P5.04	Detail 1: provide air gap or vacuum breaker on elevated flush tank			

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P-28	DCG	P6.01	Detail 3: Make Air gap double the size of the indirect waste line size			
P-29	DCG	P6.01	Detail 4: provide size of exp tank, provide union and shutoff to exp tank			
P-30	DCG	P6.01	Detail 4: provide mixing valve on hot water lines from heaters			
P-31	DCG	P6.01	Detail 4: label relief valve			
P-32	DCG	P6.01	Detail 5: pressure gauge leader pointing to wrong symbol			
P-33	DCG	P6.01	Detail 6: Provide shutoffs			
P-34	DCG	P6.01	Consider showing details 7 and 8 on P5.01			
P-35	DCG	P6.02	Detail 4: provide vent to outside from pressure relief valve			
P-36	DCG	P6.02	Detail 4: provide alarm switch/ sensor on lines to gas system distribution and to outside of building			
P-37	DCG	P6.02	Detail 6: Where is dimension shown on grout sealant			
P-38	DCG	P7.01	Detail 1: stretch viewport to the left			
P-39	DCG	P7.01	Is piping exposed serving 3 compartment sink?			
P-40	DCG	P7.01	Provide vents on underground piping			
P-41	DCG	P7.01	"YH-1" designation should read "WH" for wall hydrant			
P-42	DCG	P7.01	Are pipes dropping along column line 1 in front of windows?			
P-43	DCG	P7.01	100 mm greywater waste is referred to as kitchen waste on other plans- keep consistent			
P-44	DCG	PS.01	Provide vent on grease basin			
P-45	DCG	PU.01A	In sub-sterile room provide vent on floor drain			
P-46	DCG	PU.01A	Provide cleanouts on main san line maximum 100' spacing			
P-47	DCG	PU.01B	Shower/ Bathing room: define sanitary line at intersection of column line B6			
P-48	DCG	PU.01B	Provide cleanouts on main san line maximum 100' spacing			
P-49	DCG	PU.01C	Show pipe connections to fixtures in patient bedrooms			
P-50	DCG	PU.01C	In WC MENS ADMN-005 provide vent for floor drain			
P-51	DCG	PU.01D	Provide cleanouts on mains san line maximum 100' spacing			
P-52	DCG	PU.01D	In toilet room north of Nurse Station SLIN-004; provide more clearance between cleanout and wall (typical for all cleanouts)			
P-53	DCG	PU.01D	In WC LAB-001 provide vent on floor drain			
P-54	DCG	FP0.02	Sheet note 2: identify location of FEC-1			
P-55	DCG	FP4.01	Provide fire dept. connection			
P-56	DCG	FP4.01	Provide flow and tamper switches on valves			
P-57	DCG	FP5.02	provide valve on bypass line over future fire pump			
P-58	DCG	FP5.02	Provide tamper switches on valves			
P-59	DCG	FP5.02	Detail 1: provide alarm valve and trim in place of wafer check valve			
P-60	DCG	FP5.02	Detail 1: Provide eccentric reducer on inlet to fire pump			
P-61	DCG	FP5.02	Detail 1: Water supply from water storage tank size is inconsistent with FP0.02			

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WO-A-0022

Response Legend
A - Agree
D - Disagree
O - Out of scope
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Comment #	Reviewer	Reference	Comment	Response Code	Response	Back-Check
ELECTRICAL COMMENTS ON 50 BED DISTRICT WOMEN'S HOSPITAL DRAWINGS, AYBAK, AFGHANISTAN						
Civil	Civil Drawing Comments	2-3	Add symbol for Fire Alarm Manual Pull Station			
Struct	Structural Drawing Comments	4-5	Verify the location for Keyed Note 1.			
Mech	Mechanical Drawing Comments	6-8	Add Air Terminals for roof mounted equipment if required.			
Plumb	Plumbing Comments	9-10	No magnetic door hold open devices are shown			
Elec	Electrical Drawing Comments	11-12	FACP and FAAP are not shown.			
Tech	Technical Drawing Comments	13-16	Verify the Stand Alone Circuit Breaker rating. It seems high.			
E-7	JAS	E6.01	General notes 1. & 2. refer to details on sheet E6.04 which is not included in this package.			
E-8	JAS	E6.01	In Detail 6, MSGB Detail, need to add metric equivalent size for 3/0 cable.			
E-9	JAS	E6.01	In Detail 7, Building System Ground Diagram, consider adding a connection to the building foundation concrete reinforcing steel. Ufer grounds are very effective.			
E-10	JAS	E6.02	Why are Telecommunication Hand Hole details shown. Should these be electric hand holes?			
E-11	JAS	Specifications - General	Provide metric equivalent for all measurements and wire sizes.			
E-12	JAS	Specifications - General	Revise or remove all references to Division 16 Sections.			
E-13	JAS	26 05 00	Page 11, Paragraph 3.11B. Revise professional registration requirements. Project is not located in Illinois.			
E-14	JAS	26 05 19	Paragraph 1.07.C. Dielectric is spelled incorrectly in the last sentence.			
E-15	JAS	26 05 19	Verify color coding for conductors.			
E-16	JAS	26 05 19	Paragraphs 3.02.G. & H. Specified 2 different wiring methods for Class 2 Control Circuits.			
E-17	JAS	26 05 19	Paragraph 3.05.A.2. Should be 2.5 sq mm, not 25.			
E-18	JAS	26 05 19	Paragraph 3.08.A. Revise reference to Division 16			
E-19	JAS	26 05 19	Paragraph 3.13.A. Revise reference to Division 16.			
E-20	JAS	26 05 26	Paragraph 3.09.A. Verify that there is a Division 2 Section "Landscaping".			
E-21	JAS	26 05 29	Paragraph 1.05.B. Revise 110 cm (4 inch) concrete housekeeping pad. Inaccurate conversion			
E-22	JAS	26 05 29	Paragraph 2.05.C.1.b. 1.5 mm (4 inch). Inaccurate conversion.			

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E-23	JAS	26 05 33	Paragraph 2.05.C.1 & .2. Specified both compression and set screw couplings for EMT smaller than 1". Is this what was intended?			
E-24	JAS	26 05 48	Paragraph 2.2.C. Remove bracketed text.			
E-25	JAS	26 09 23	Paragraph 3.06.A. Omitted Division 25 Section number.			
E-26	JAS	26 24 13	Paragraph 2.03.C.2. Edit bracketed text			
E-27	JAS	26 24 13	2.03.J.1 & 2. Edit choice between Main Circuit Breaker and Main Fusible Switch.			
E-28	JAS	26 24 16	Pages 6 & 7. Remove "Specifier Guide Notes" and edit paragraphs accordingly.			
E-29	JAS	26 26 30	Paragraph 1.05.D. Systems are not 120 volts, but 220.			
E-30	JAS	26 26 30	General-Verify that equipment models specified are suitable for the system voltage.			
E-31	JAS	26 27 26	Paragraph 3.02.B. No text provided.			
E-32	JAS	26 28 10	Paragraph 2.01.C. Verify that devices listed in tables will operate properly in a 220/380 volt, 50 Hz system.			
E-33	JAS	26 28 10	Paragraph 2.02.C. Verify that devices listed in tables will operate properly in a 220/380 volt, 50 Hz system.			
E-34	JAS	26 29 13	Paragraph 2.06.D.9. Remove shading from the word "thyristor" in the last line.			
E-35	JAS	26 32 13	Paragraph 1.02.C. Generator ratings specified do not match those shown on the drawings.			
E-36	JAS	26 32 13	Paragraph 2.04.B & .C. Coordinate values shown with 1.02.C and drawings.			
E-37	JAS	26 35 33	Paragraph 2.02.A. No unusual conditions are listed.			
E-38	JAS	26 35 33	Paragraph 3.01.A. Switchboard SER-1 in not shown on the drawings.			
E-39	JAS	26 35 33	Paragraph 3.06.A. Wrong spec section referenced.			
E-40	JAS	26 43 13	Paragraph 1.06.A.2 Edit text.			
E-41	JAS	26 43 13	Paragraph 2.02.B.4, 5 & 6. Verify ratings for 380Y/220 volt, 50Hz system operation.			
E-42	JAS	26 51 00	Paragraph 2.02.B.7.g. Input frequency is 50 Hz.			
E-43	JAS	26 51 00	Paragraph 2.02.C.3. Outdoor temperature should be -28C.			
E-44	JAS	28 05 00	Paragraph 3.11.B. Same comment as from 26 05 00.			

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TECHNICAL COMMENTS OF 50 BED DISTRICT WOMEN'S HOSPITAL DRAWINGS, AYBAK, AFGHANISTAN.						
Civil	Civil Drawing Comments	2-3				
Struct	Structural Drawing Comments	4-5	Designer preference but I would recommend against using field-polished style connectors in lieu of cam lock style due to the skill required extra labor and equipment required.			
Mech	Mechanical Drawing Comments	6-8	Online diagram on drawing T4.01 show 12 strands of fiber not six as mentioned in the DA			
Plumb	Plumbing Comments	9-10	There are only 4 Comm spaces on the drawings the DA says 8			
Elec	Electrical Drawing Comments	11-12	Drawing only show 3 TV outlets which are all located in the waiting rooms. The DA says Treatment rooms and patient rooms will have CATV outlets as well.			
Tech	Technical Drawing Comments	13-16	DA says to provide 300 pr cat 6 S110 punch down frame. This frame will be used to terminate Cat 3 200pr riser cable s from 3 different TRs. Cat 6 is not necessary and you will need at least two on them to accommodate the termination of three 200 pr voice cables.			
	JLB	VI Tech C. 12. a)	Fiber optic connector DA says to use LC series connector in all modular outlets. No modular out lets are shown on the drawings. Recommendation given that Density is not an issue in this project I suggest using the same connectors in both the backbone and horizontal termination this way you don't have to order hybrid patch cables.			
Specs						
	JLB	General	The 7 spec sections in Div 27 should be looked at for content, accuracy and consolidated opportunities because many of the spec sections specify materials the same materials and its not always the same dimension and material from section to section. When copying other sections to create new sections the footers should be changed to reflect the new sections #. If using 2004 format remove all references to Div 16 and 17 from reference sections.			
	JLB	27 11 00-1 2.01	Depth of Box should be given			
	JLB	27 11 00-1 Part 3	Plaster cover -cabinets should all reside in Materials			
	JLB	27 11 00-2	execution is typically Part 3.			
	JLB	27 11 00-3 4.02 E	Back boards should be painted with a lightly colored paint the help with light reflection in the room. Reference Bicsi TDMM			
	JLB	27 11 00-3 4.02 E	Check F and G Bicsi typically dose not recommend this.			

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	JLB	27 11 01-4 2.01 C	ladder cable trays T7.01 calls for 16"(38.1cm) W ladder cable tray I would recommend that 12 " be used give the small size of the telecom spaces. 12" has more than enough capacity for the # of cables being installed in these rooms.			
	JLB	27 11 01-4 2.01 D 1	Different boxes that spec'd in 27 11 00-1 2.01			
	JLB	271101 -5 2.03 C 1	Brackets left in			
	JLB	27 11 01-7 3.02	Raceway and boxes for electrical systems is not where you would find information regarding under ground entrances.			
	JLB	27 11 01-7 3.02	Cable can be routed and loosely bundled with in the TR room but should not be bundled in the cable tray as depicted on the Detail # 2 on drawing T6.01. when cables are perfectly combed and bundled at the same spacing for long lengths it can degrade the performance of the cable.			
	JLB	27 13 00-5 2.01 C.	Pathways and back boards have already been spec'd in 27 11 01			
	JLB	27 13 00-6 2.01 D	Div 27 raceways and boxes for electrical systems is not a valid section			
	JLB	27 13 00-6 2.05 B 1 and 2	Reference to Div 16 should be Div 26			
	JLB	27 13 01	Footer needs to be changed to reflect section header			
	JLB	27 13 01-4	Horizontal cable have already been specified in 27 13 00 and should not be specified in 27 13 01			
	JLB	27 13 01	pathways and backboards have already been specified in 27 11 01 and 2713 01			
	JLB	27 13 01 - 2.03 B	DA calls for 200 pr cable not 100 pr and Cat 3 not Cat 5 e			
	JLB	27 13 01 2.05 B	Drawing T4.01 calls for 12 strands of fiber			
	JLB	27 13 01 2.05 B	No single mode fiber mentioned anywhere else. Remove all references to single mode if not applicable			
	JLB	27 13 01 2.05 B	Plenum cable should be specified			
	JLB	27 13 01 2.06 D 2	DA call for SC connectors.			
	JLB	27 41 33	Cable Rg 11 and RG 6 cable and connectors already spec'd in 27 13 00 Remove from on place.			
	JLB	Div 27 General	Provide specification for ad cabling or give detail on drawings.			
	JLB	Div 27 General	Some where in the spec's and or on the drawings it should be noted that there must be 12" of clear space above cable trays for future access. Often other utilities will install their conduits pipes and duct directly on top of the comm. pathways rendering them useless.			

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Drawings						
	JLB	T0.01	There are many symbols and on this drawing that are not used on the rest of the drawings. Symbols that are not used should be removed			
	JLB	T0.02	Sheet notes Change HAD to HAS			
	JLB	T1.01A Keyed Notes	Note # 1 Specify size of sleeve. Also add not to provide in quantities shown.			
	JLB	T1.01A-T1.01D Keyed Notes	Note #2 cable tray is really wide I know that all cable from data CATV nurse call and other systems will use this tray but 24" is a lot of space in a relatively crowded hallway. Recommend calculating the worst case scenario fill ratio for any spot in in the whole facility and specify a tray size that will accommodate the number of cable while allowing for a reasonable amount of growth. Max fill ratio shouldn't exceed 40% fill for cable tray or conduits. Also be sure to coordinate with Arch,Mech,Plumb,and Fire Protection to make sure that cable tray is installed so that pipes an ducts will not be installed on top, through or in cable tray. The hallways appear to be very congested in spots			
	JLB	T1.01A-T1.01D Keyed Notes	Note # 3 Specify size of sleeve. Also add not to provide in quantities shown.			
	JLB	T1.01A-T1.01D Keyed Notes	Note # 4 Specify size of sleeve. Also add not to provide in quantities shown.			
	JLB	T1.01A-T1.01D Keyed Notes	Note # 5 Remove note if not applicable to drawing.			
	JLB	T1.01 D	I would suggest routing cable tray that feeds room MEPF-008 through the nurse station and storage room if possible as opposed to routing the cable tray through Gynecology in an effort to avoid possible disruption by a future install.			
	JLB	T1.01B	Need to show detail or give direction on how to connect outlets in rooms with gypsum ceilings. I would assume that in these instances conduit should be run from out let to tray.			
	JLB	T1.01A-T1.01D	No wireless outlets are shown and only three coax outlets are shown. The DA calls for AV outlets in several conference rooms but none are shown.			
	JLB	T2.01A-D	Equipment locations are shown in some of the comm. rooms and not others the locations that are shown do not match T7.01 locations . Zones are not Identified.			
	JLB	T4.01 Detail 2	Fiber Riser DA calls for 6 strand of fiber though I believe 12 is a better quantity			
	JLB	T4.01 Detail 1	Copper riser in complete and Ad calls for 200 pr copper cables			
	JLB	T4.01 Detail 4	Make sure that the size of Copper ground conductor matches what is called for in the specs.			

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	JLB	T6.01 Detail 5	No wireless outlets were found on drawings. Suggest adding outlets or remove from drawings.			
	JLB	T6.01 Detail 13	Understand the intent but a ground bushing would be use to accomplished this as oppose to screwing a two hole ground lug to the side of the conduit. Is the intent to install conduits from all outlets to the cable tray or only in certain spots? Need to clarify and give more direction on this because in the specs it allows for the use of J hooks and other open pathways systems. Also minimum conduit size should be specified usually 1".			
	JLB	T6.01 Detail 12	Rack should show vertical management as well as a typical rack elevation with wire management patch panels and allocated space for equipment. 6" of space should be left between Comm. rack and ladder cable tray.			
	JLB	T6.01 Detail 1	There is no concrete slab for a ceiling. Change to say mount to structure above.			
	JLB	T7.01 Gen	Rooms are really small. I would suggest looking at wall mount solution for patch panels and equipment mounting. By the time you get a two post rack in these spaces you wont be able to access the back once you bolt it to the floor.			
	JLB	T7.01 Gen	Show different symbol for ladder cable tray because the symbol show in for wire mesh cable tray. Also I would recommend changing size fro 18 or 16 inch to a 12" in an effort to allow for access to conduits above as the rooms are pretty small 12 " ladder rack will provides plenty of capacity. Be sure to coordinate terminology of between drawing and specs when referring to ladder rack. I think the specs call it ladder cable tray.			
	JLB	T7.01 Detail 1	No external conduits are show for service provider to enter building. You are probably waiting on information. At bare minimum a Man hole located outside the building should be placed with several 100mm duct entering this room.			
	JLB	T7.02	Need more detail, cable/connector types because there is no spec section for this portion of work.			
	JLB	T7.02 Detail 1	locations not shown			
	JLB	T7.03	online diagrams for nurse call, voice and data would be helpful			